

ON "THE CHAMBERED NAUTILUS"
BY OLIVER WENDELL HOLMES

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If Oliver Wendell Holmes is remembered by the present generation, it is because of *Old Ironsides*. This poem, written in 1830 whilst he was a student at the Harvard Law School, led directly to the preservation of the frigate *Constitution*, which had been slated to be dismantled at the Charlestown Navy-Yard. He changed from law to medicine and became a professor at the Harvard Medical School. He invented an improved stethoscope and wrote a medical classic on Puerperal Fever thereby helping to save the lives of many women during childbirth, but we only look for the influences that inspired him to write *The Chambered Nautilus*.

In the introduction to a new edition of *The Autocrat of the Breakfast Table*, first published in 1858, Van Wyck Brooks (1960: v) pointed out that what kept the book alive was an ever-timely wit that sprang from the "code of finalities", a general agreement of "values" as they were later called. This, according to Holmes, was the "necessary condition of profitable talk between two persons," the sort said to have flourished at the Saturday Club founded in 1855. Amongst the original members besides Holmes, one of the founders, were Emerson, Longfellow, Lowell, Motley, and Louis Agassiz, who was to receive the charter for the Museum of Comparative Zoology in 1859 from the Commonwealth of Massachusetts. The extent to which the club was a mutual admiration society will not even be guessed at, but both it and the Museum are still extant.

Brooks (1936: 354), paraphrasing the doctor, speaking of his inspiration says, "Well he recalled the moments when a 'lyric conception' had struck him like a bullet in the forehead, when the blood dropped from his cheek and he felt himself turning as white as death. Once or twice only had he had this feeling, -- as when he wrote *The Chambered Nautilus*, -- a creeping as of centipedes running down the spine, a gasp, a jump of the heart, then a sudden flush, a beating in the vessel of the head, then a long sigh -- and the poem was written."

Holmes' poem was considered to be fresh, intense in feeling, and American. In his introduction he says, "We need not trouble ourselves about the distinction between this [Pearly Nautilus] and Paper Nautilus, the *Argonauta* of the ancients. The name applied to both shows that each has long been compared to a ship, as you may see more fully in Webster's Dictionary (1846) or the 'Encyclopedia' to which he refers." Webster also calls attention to Roget (1836: 191, figs. 126, 127) where there are rather wretched figures of a *Nautilus*, one showing it sectioned. Of this figure Holmes says, "the last will show you the series of enlarging compartments successively dwelt in by the animal that inhabits the shell which is built in a widening spiral. Can you find no lesson in this?" This equiangular spiral is discussed by Thompson (1942: 748).

The poem opens with the line, "This is the ship of pearl," the following seven lines refer not to the *Nautilus*, but to the female of *Argonauta argo*, an octopod. The Argonaut, or Paper Nautilus, has mistakenly been known for over 2,000 years as a navigator which sails the warm seas of the world, near the surface, in a boat of shell. While the first membranes, do look like miniature sails, both the

ancients and Holmes were wrong as to their function. Actually, the skin glands of these arms secrete calcium carbonate which forms a delicate white "shell" or nest-case which does not resemble any other cephalopod shell and, unlike the several species of *Nautilus*, is not chambered. Lane (1960: 9) described how the shell is formed, but that is not relevant to this discussion. The "Encyclopedia" mentioned by Webster as authored by Cuvier (see under: Griffith and Pidgeon, 1834: 9) claims incorrectly that the six tentacula are used as oars. Sex is not mentioned in these lines describing the anatomy of the female *Argo*, it might please feminists to know that while the female may reach over a foot in length, the dwarf male is seldom more than one half an inch in length. Yes, one half inch.

Beginning with the ninth line, "Wrecked is the ship of pearl!" is a description of the shell of the *Nautilus*, probably *Nautilus pompilius*, one of six living species remaining of the some 3,000-odd species known from the fossil record. Living *Nautilus* are rarely seen at the surface, except along the coast of the Nicobar Islands. As the animal moves forward into each enlarging chamber of its shell, it seals off all but a small hole with slender wall. A siphuncle runs back through the hole in each chamber to the original one. Gas in the chambers gives the animal, which lives in the last chamber, buoyancy. Thus, it is not quite true that he "knew the old [chamber] no more."

The facts would have probably been of little interest to Holmes who says, "Thanks for the heavenly message brought by thee." He seems to have been quite impressed with the physico-theology which was especially popular in England during the first half of the nineteenth century, probably having studied Paley (1802) *Natural Theology: Or*

Evidences of the Existence and Attributes of the Deity Collected from the Appearances of Nature, but especially by the *Bridgewater Treatise* authored by Roget (1836) of *Thesaurus* fame. Paley and the other authors of the *Treatises* (1833-36) used scientific subjects to demonstrate “the Power, Wisdom, and Goodness of God, as manifested in the Creation” (see: Mayr, 1982: 367-375). Science and theology were not separate subjects in those days, and while Agassiz never accepted evolution, there is no evidence that Holmes did either, though the records of the Boston Athenaeum indicate that from January 31 to March 9, 1845 he had out *Vestiges of the Natural History of Creation* (1844) published anonymously by Robert Chambers, which caused a sensation when “the author embraced the doctrine of Progressive Development as a hypothetic history of organic creation.” In a lengthy review, glowing with praise, of Agassiz’s *Contributions to the Natural History of the United States of America*, Holmes (1858) concluded that, “Natural History must, in good time, become the analysis of the thoughts of the Creator of the Universe, as manifested in the animal and vegetable kingdoms.” There is no evidence that the subsequent publication of Darwin’s *On the Origin of Species by Means of Natural Selection* in 1860, had any more effect on Holmes views that it did on those of Agassiz. Agassiz soon ceased to oppose evolution on a professional level, but continued his attack on the popular level where his prestige remained high, becoming increasingly more dogmatic. Morris (1997: 122), however, has pointed out that in the chapter added by Agassiz (1869) to the French translation of his *Essay on Classification* Agassiz explained what he believed to be a factual rejection of Darwinism, based on the data he thought Darwin was

unable to explain, as well as to Ernst Haeckel's application of Darwinism to evolutionary classifications. Holmes and Agassiz were able to continue basking in each others admiration at the Saturday Club until the death of Agassiz in 1873.

Quoting an early biographer of Holmes in his *Early Years of the Saturday Club*, Emerson (1918: 167) relates that when once asked if he had "derived more satisfaction from having written his 'Essay on Puerperal Fever,' which had saved so many lives, or from having written the lyric which had given pleasure to so many thousands. Dr. Holmes replied 'I think I will not answer the question you put to me. I think oftenest of *The Chambered Nautilus*, which is a favorite poem of mine, though I wrote it myself. The essay comes up at long intervals. The poem repeats itself in my memory, and its very often spoken of by correspondents in terms of more than ordinary praise.'

Bowen (1945: 321) mentioned that when Holmes died at home, in 1894, seated in his chair that, "on a table by the fire the pearly nautilus shell sat, gleaming with iridescent color." This doubly sectioned shell is now in the Countway Library of the Harvard University Medical School.

Unlike Thomas Stearns Elliot writing, *The Waste Land*, some sixty-five years later, who subsequently admitted that his notes to the poem were bogus scholarship" and who gave no credit to Madison Cawein from whom he cribbed so much, Holmes introduced his poem by giving his sources and possibly his inspiration for *The Pearly Nautilus*.

ACKNOWLEDGEMENTS

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LITERATURE CITED

- Agassiz, L. 1869. De l' espèce et de la classification en zoologie. Trans. Felix Vogeli. Paris: Bailière. pp. 375-391.
- Bowen, C.D. 1945. Yankee from Olympus: Justice Holmes and his family. Little Brown and Company: Boston.
- Brooks, Van Wyck. 1936. The Flowering of New England. The Modern Library. Random House, Inc.: New York.
- Brooks, Van Wyck. 1960. Introduction [to] Holmes, O.W., The Autocrat of the Breakfast Table. Everyman's library, Dutton, New York. Reprinted 1960 and 1970.
- Emerson, E.W. 1918. The Early Years of the Saturday Club 1855-1870. Houghton Mifflin Company: Boston and New York.
- Griffith, E. And E. Pidgeon. 1834. The Mollusca and Radiata arranged by the Baron Cuvier with supplementary additions to each other, vol. 12, Whittaker and Co.: London.

- Holmes, O.W. [1858]. *The Autocrat of the Breakfast Table*. Everyman's Library, Dutton: New York. Reprinted 1960 and 1970.
- Lane, F.W. 1960. *Kingdom of the Octopus. The Life History of the Cephalopoda*. Sheridan House: New York.
- Mayr, E. 1982. *The Growth of Biological Thought and Diversity, Evolution, and Inheritance*. The Belknap Press of Harvard University Press Cambridge, Massachusetts, London, England.
- Morris, P.J. 1997. Louis Agassiz's argument against Darwinism in his additions to the French Translation of the *Essay on Classification*. *Journal of the History of Biology* **30**: 121-134.
- Owen, Richard. 1832. *Memoir on the Pearly Nautilus (Nautilus Pompilius, Linn.) with illustrations of its external form and internal structure*. Council of the Royal College of surgeons in London. Richard Taylor: London.
- Roget, P.M. 1836. *Animal and Vegetable Physiology considered with references to natural Theology*. 2 vols. Carey, Lea & Blanchard: Philadelphia. This was the edition of the Bridgewater Treatises most probably available to Holmes.
- Thompson, D'Arcy, W. 1942. *On Growth and Form*. University Press; Cambridge; England New Edition.
- Webster, N. 1846. *Webster's Dictionary, unabridged in one volume*. G. and C. Merriam: Springfield, Massachusetts.